CLAIMS

What is claimed is:

1. A method, comprising:

generating a primary interrupt queue head and a secondary interrupt queue head, the primary and secondary interrupt queue heads to represent an endpoint, the endpoint to represent a transaction with at least one remote device over a serial bus, wherein execution of the endpoint requires more than one frame, the frame comprising a plurality of micro-frames;

initializing the primary and secondary interrupt queue heads; and

scheduling the primary and secondary interrupt queue heads, wherein the primary queue head is positioned in a first frame and wherein the secondary interrupt queue head is positioned in a second frame, the second frame being immediately subsequent to the first frame.

2. The method of claim 1, wherein the generating of the primary and secondary interrupt queue heads is done when the execution of the endpoint is to begin in one of a third, fourth, or fifth micro-frame in the plurality of micro-frames.

3. The method of claim 1, wherein the generating of the primary and secondary interrupt queue heads is done when the endpoint is scheduled at a period of 4 microseconds or greater.

4. The method of claim 1, the initializing of the primary and secondary interrupt queue heads further comprising:

initializing the primary interrupt queue head to do one start split; and

initializing the secondary interrupt queue head to do two complete splits.

5. The method of claim 1, the initializing of the primary and secondary interrupt queue heads further comprising:

initializing the primary interrupt queue head to do one start split and one complete split; and

initializing the secondary interrupt queue head to do two complete splits.

6. The method of claim 1, the initializing of the primary and secondary interrupt queue heads further comprising:

initializing the primary interrupt queue head to do one start split and two complete splits; and

initializing the secondary interrupt queue head to do one complete split.

7. The method of claim 1, further comprising reinitializing the primary and secondary interrupt queue heads.

8. The method of claim 1, wherein the at least one remote device is a full-speed or low-speed device.

9. The method of claim 1, further comprising polling the primary and secondary interrupt queue heads at one-half of their period.

10. The method of claim 9, further comprising polling the secondary interrupt queue head to determine the status of the secondary interrupt queue head.

11. The method of claim 9, further comprising polling the primary interrupt queue head to determine the status of the primary interrupt queue head.

12. A machine-readable medium that provides instructions, which when executed by a machine, causes the machine to perform operations, comprising:

generating a primary interrupt queue head and a secondary interrupt queue head, the primary and secondary interrupt queue heads to represent an endpoint, the endpoint to represent a transaction with at least one remote device over a serial bus, wherein execution of the endpoint requires more than one frame, the frame comprising a plurality of micro-frames;

initializing the primary and secondary interrupt queue heads; and

scheduling the primary and secondary interrupt queue heads, wherein the primary queue head is positioned in a first frame and wherein the secondary interrupt queue head is positioned in a second frame, the second frame being immediately subsequent to the first frame.

13. The machine-readable medium of claim 12, wherein the generating of the primary and secondary interrupt queue heads is done when the execution of the endpoint is to begin in one of a third, fourth, or fifth micro-frame in the plurality of micro-frames.

14. The machine-readable medium of claim 12, wherein the generating of the primary and secondary interrupt queue heads is done when the endpoint is scheduled at a period of 4 microseconds or greater.

15. The machine-readable medium of claim 12, the initializing of the primary and secondary interrupt queue heads further comprising:

initializing the primary interrupt queue head to do one start split; and

initializing the secondary interrupt queue head to do two complete splits.

16. The machine-readable medium of claim 12, the initializing of the primary and secondary interrupt queue heads further comprising:

initializing the primary interrupt queue head to do one start split and one complete split; and

initializing the secondary interrupt queue head to do two complete splits.

17. The machine-readable medium of claim 12, the initializing of the primary and secondary interrupt queue heads further comprising:

initializing the primary interrupt queue head to do one start split and two complete splits; and

initializing the secondary interrupt queue head to do one complete split.

18. The machine-readable medium of claim 12, further comprising reinitializing the primary and secondary interrupt queue heads.

19. The machine-readable medium of claim 12, wherein the at least one remote device is a full-speed or low-speed device.

20. The machine-readable medium of claim 12, further comprising polling the primary and secondary interrupt queue heads at one-half of their period.

21. The machine-readable medium of claim 20, further comprising polling the secondary interrupt queue head to determine the status of the secondary interrupt queue head.

22. The machine-readable medium of claim 20, further comprising polling the primary interrupt queue head to determine the status of the primary interrupt queue head.

23. An apparatus, comprising:

a high-speed serial bus;

a full-/low-speed serial bus;

a hub, comprising:

a transaction translator unit, coupled with the high-speed serial bus and the full-/low-speed serial bus, to translate bits of data associated with an endpoint between a transfer rate associated with the high-speed serial bus and a transfer rate associated with the full-/low-speed serial bus;

a host, comprising:

a host controller driver unit to generate, initialize, and schedule a primary interrupt queue head and a secondary interrupt queue head, the primary and secondary interrupt queue heads to represent the endpoint, the endpoint representing a transaction with at the least one remote device, wherein execution of the endpoint requires more than one frame, the frame comprising a plurality of micro-frames;

a host controller unit, coupled with the high-speed serial bus and the host controller driver unit, to transmit the bits of data associated with the endpoint to and receive the bits of data associated with the endpoint from at least one remote device; and

the at least one remote device, coupled with the full-/low-speed serial bus, to transmit bits of data associated with the endpoint to and receive bits of data associated with the endpoint from the host controller unit.

24. The apparatus of claim 23, wherein the host controller driver unit is to schedule the primary and secondary interrupt queue heads such that the primary queue head is positioned in a first frame and such that the secondary interrupt queue head is positioned in a second frame, the second frame being immediately subsequent to the first frame.

25. The apparatus of claim 23, wherein the host controller driver unit is to generate the primary and secondary interrupt queue heads when the execution of the endpoint is to begin in one of a third, fourth, or fifth micro-frame in the plurality of micro-frames.

26. The apparatus of claim 23, the host further comprising an enhanced host controller interface unit, which includes the host controller unit, the enhanced host controller interface unit to provide an interface between the host controller unit and the host controller driver unit.

27. The apparatus of claim 23, wherein the host controller driver unit is to generate the primary and secondary interrupt queue heads when the endpoint is scheduled at a period of 4 microseconds or greater.

28. A system, comprising:

a high-speed signaling environment;

a full-/low speed signaling environment;

a hub, wherein the hub is located within the high-speed signaling environment and the full-/low speed signaling environment, to translate bits of data associated with an endpoint between a transfer rate associated with the high-speed signaling environment and a transfer rate associated with the full-/low-speed signaling environment;

a host, located within the high-speed signaling environment, coupled with the hub, to transmit bits of data associated with an endpoint to and receive bits of data associated with the endpoint from at least one remote device, and to generate, initialize, and schedule a primary interrupt queue head and a secondary interrupt queue head, the primary and

secondary interrupt queue heads to represent the endpoint, the endpoint representing a transaction with at the least one remote device, wherein execution of the endpoint requires more than one frame, the frame comprising a plurality of micro-frames; and

the at least one remote device, coupled with the hub, to transmit bits of data to and receive bits of data from the host, wherein the at least one remote device is located within the full-/low-speed signaling environment.

29. The system of claim 28, wherein the host is to schedule the primary and secondary interrupt queue heads such that the primary queue head is positioned in a first frame and such that the secondary interrupt queue head is positioned in a second frame, the second frame being immediately subsequent to the first frame.

30. The system of claim 28, wherein the host is to generate the primary and secondary interrupt queue heads when the execution of the endpoint is to begin in one of a third, fourth, or fifth micro-frame in the plurality of micro-frames.